

# Guidance on the creation, submission and usage of EuPhraC and ESCom phrases

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## Introduction

„EuPhraC“<sup>1</sup> is the acronym for the European Phrase Catalogue and is provided by a BusinessEurope working group. It is part of a larger initiative to streamline communication along the supply chain by providing a comprehensive set of tools, data and guidance for an IT based information exchange, aiming at companies both in the chemicals and IT business.

Initially, EuPhraC consisted of standard phrases to be used in the Safety Data Sheets (SDS). EuPhraC has been expanded in early 2010 to include headers and phrases of Exposure Scenarios (ES) for extended SDS as foreseen by the REACH Regulation 1907/2006 as well as being compliant with IUCLID software (International Uniform Chemical Information Database) by offering special data fields required for registration.

EuPhraC's aim is to aid supply chain communication by making expert approved standard phrases available to all interested companies across Europe, including suppliers, downstream users, distributors and software providers. Therefore, the English version of the standard phrase catalogue is available under the Creative Commons License “Attribution 3.0 Unported”, so the use is for free in any commercial or non-commercial setting (full wording: <http://creativecommons.org/licenses/by/3.0/>).

The ESCom<sup>2</sup> package for the exchange of Exposure Scenario data between IT systems has been developed to enable consistent communication of ES information throughout the Supply Chain. The package consists of 2 components:

- ESCom XML standard, the XML format;
- ESCom standard phrase catalogue, covering the standard phrases for exposure scenario content.

The development of the ESCom standard has been initiated by Cefic and DUCC (Downstream Users of Chemicals Coordination group). The development of the ESCom XML standard has been performed by a group of IT providers. In parallel, Cefic and DUCC have taken responsibility for the ESCom standard phrase catalogue with the objective to develop standard phrases for Exposure Scenarios. Initial versions of both ESCom XML as well as ES standard phrase catalogue have been published in May 2011 (version 1.1), with updates in 2011-2014. A fully revised ESCom XML and ES standard phrase catalogue (version 2.0) has been released in July 2015.

On the Exposure Scenario standard phrases, EuPhraC and ESCom are closely working together with the objective to develop and maintain a shared library of unique Exposure Scenario phrases. The ESCom Phrase Working Group develops and maintains the phrase library, which is then shared and integrated into the EuPhraC library.

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<sup>1</sup> For more information, see: <http://www.esdscom.eu/english/euphrac-phrases/>

<sup>2</sup> For more information, see: <http://www.cefic.org/Industry-support/Implementing-reach/escom/>

## Download and Usage of EuPhraC and ESCom phrases

In order to use EuPhraC Standard Phrases in a software system, please download the appropriate format at <http://www.euphrac.eu>. This website also provides more documents and information on the current status. Currently, a CSV and a HTML format are available for download. Adding an XML format as well as options for partial access to subsets of the library, such as the exposure scenario, are under discussion. Please consult the documentation of your IT system or ask your IT provider vendor how to import phrase data into your system. Note that both for downloading and using EuPhraC and the ESCom XML a license agreement has to be signed.

The phrase download contains a list of single phrases. The EuPhraC tree structure and thus the „structure code“ provides information on parts of the Safety Data Sheet where a phrase might be appropriate. In the ESCom standard phrase catalogue every phrase is mapped to the specific attribute of the XML where it can be used, thereby avoiding the misuse of phrases. The catalogue metadata also provide information on the part of the ES where the phrase can be used.

Both the ESCom standard phrase catalogue (Excel format) and XML can be downloaded from the Cefic website (<http://www.cefic.org/Industry-support/Implementing-reach/escom>) and from the eSDScom website (<http://www.esdscom.eu>). The ESCom Standard Phrase Catalogue is also available for download as a Chesar import file (ECHA Chemical Safety Assessment and Report tool)<sup>3</sup>. This enables the user to import the Phrase Library into Chesar.

## Working Group Contacts

EuPhraC is maintained by the „BDI Working Group EuPhraC“ which is led by the manager, Dr. Thomas Holtmann (BDI), and the chair, Dr. Anita Hillmer (Volkswagen AG).

BDI and Cefic have agreed to set up a common framework for the cooperation regarding the addition to EuPhraC of standard phrases for exposure scenarios coming from the ESCom standard phrases catalogue, as prepared by sector associations, consortia and individual companies. The current Cefic representative in this WG is Dook Noij (Dow Benelux).

The main contacts for EuPhraC are:

Organisational issues / WG Manager:	Dr. Thomas Holtmann ( <a href="mailto:T.Holtmann@bdi.eu">T.Holtmann@bdi.eu</a> )
Content issues / WG chair:	Dr. Anita Hillmer ( <a href="mailto:Anita.Hillmer@volkswagen.de">Anita.Hillmer@volkswagen.de</a> )
Technical and linguistic issues:	Dr. Dirk Henckels ( <a href="mailto:dirk.henckels@qualisys.eu">dirk.henckels@qualisys.eu</a> )
Content issues (ES phrases):	Dook Noij ( <a href="mailto:dook.noij@dow.com">dook.noij@dow.com</a> )

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<sup>3</sup> More information on Chesar is available here: <https://chesar.echa.europa.eu/>

## Structure of Standard Phrases

The main purpose of using standard phrases is the efficient and consistent creation of harmonized text paragraphs for Safety Data Sheets and Exposure Scenarios, which will ease electronic data transfer of standardised phrases between suppliers and their customers and also facilitates the translation of documents into other languages.

In order to have phrases used in a consistent and transparent manner, principles, rules and procedures need to be adhered to by all authors who create and maintain phrase data.

Note that all content in the following paragraphs applies to both EuPhraC and ESCOM, unless otherwise stated.

## Phrase parameters for EuPhraC SDS phrases

The simple case of a phrase wording is a phrase without parameters:

*Use in well ventilated areas only.*

*After contact with molten product, cool skin area rapidly with cold water.*

In every case where the same phrase grammatical construction is used with varying items or values, the phrase could be parameterised: „**Do not use for more than ... hours.**“ For example, some P(recautionary) phrases require modification depending on the substance / mixture they are applied to. Parameters in EuPhraC are marked with three dots (not the special ellipsis character, which looks almost the same).

These are the facts on the parameters any phrase user and author needs to be aware of:

- Phrase parameters carry no information on which values are valid as an insertion. They can be numbers, words, or both (e.g. a value and unit). The phrase itself has no possibility to restrict this. Any information on valid parameters (e.g. range limitations for the value of the parameter such as 0-24 for hours) should be written in the phrase remark which is part of the metadata, if it is not as obvious as in the example above.

- A phrase can carry an arbitrary number of parameters, not just one.

*Example: Store at temperatures not exceeding...°C/...°F-*

- Any parameter can be a number, standard text (e.g. “EN 374”) or a phrase.
- In other languages, the parameter(s) may appear in another position of the phrase, but parameters do always appear in the same order.

*Example: Precautionary phrase: P312:*

*English: Call a POISON CENTER or doctor/physician if you feel unwell*

*German: Bei Unwohlsein GIFTINFORMATIONSZENTRUM oder Arzt anrufen*

## Phrase parameters for ESCom ES phrases

What has been mentioned above for EuPhraC SDS phrases is in general also valid for ESCom phrases for the exposure scenario for communication. However, there are a few differences:

- ESCom phrases can only carry one parameter.
- Phrases with parameters are constructed in such a way that the parameter is located at the end of the phrase:

*Avoid carrying out activities involving exposure for more than [parameter].*

- Phrases with parameters might contain up to three extra fields related to the parameter: qualifier, value, unit; a phrase cannot be recognized as a parameter-containing phrase as such; this information on the range, the values and the unit is contained in the metadata of the phrase:

*Amount per use: < 10 tonnes per year*

qualifier: "<"; value: "10"; unit: "tonnes per year"

## Application assumptions

The following assumptions on software working with the EuPhraC phrases catalogue apply:

- A phrase field in an electronic document is filled with a sequence of phrases and fixed text (e.g., temperature values, phone numbers) in arbitrary order. Phrases may even repeat in the same field and must be used in input sequence. (Software systems can restrict this to using phrases only, if fixed text can be represented with the popular concept of "user defined phrases".)
- Phrases may include one or more parameters – see above.
- Consider also if parameters can be nested: Phrases may contain a phrase as a parameter, which in turn has one or more parameters. This setup is not required so far, but keeps your IT system flexible.

Note: when only working with the ES phrases from the ESCom phrase catalogue, then handling one parameter at the end of the phrase is currently sufficient (refer to 'Phrase parameters').

## Rules on the Structure of standard phrases

Any phrase library is based on explicit or implicit assumptions on how the user (who may be a human or a software system) works with the phrases.

The catalogue is based on the following prerequisites. Examples of these rules are underlined to indicate which words belong to one phrase together; please follow these rules when proposing new phrases to make the EuPhraC SDS and ESCom ES catalogue a practical and convenient help in REACH compliance:

- **ONLY APPLICABLE FOR EUPHRAC SDS PHRASES:** Any phrase may contain one or more parameters which must be marked with three single dots ... (not the ellipsis character). If a sentence finishes right after a parameter, a fourth dot must follow the first three without a space.

*Example 1: Limit the substance content in the product to ...*

*Note the fourth dot after the parameter which works as punctuation!*

*Example 2: Covers daily exposure up to ... hours.*

*Note only three dots are present in this phrase.*

- **ONLY APPLICABLE FOR ESCom ES PHRASES:** Phrases can only contain one parameter which must be positioned at the end of the phrase.

*Example 1: Limit the substance content in the product to [parameter].*

*Example 2 (single phrase): Covers daily exposure up to [parameter].*

*Note that there is no dot at the end. In the ESCom ES catalogue phrases with parameters have extra fields contained in the metadata (qualifier, value, unit) to indicate the relevant information (e.g. x hours).*

- Only grammatically complete sentences end with a dot.

*Example grammatically complete sentence:*

*Sample via a closed loop or other system to avoid exposure.*

- List items, headers, incomplete sentences (not containing a verb), sentence fragments, etc. should not end with any punctuation (as it is easier and more common for software systems to add punctuation than to remove it). Also phrases that can be part of ES titles, use descriptors and contributing scenarios do not end with punctuation. Examples:

*Use descriptor: manufacture of fine chemicals*

*Header: Product (article) characteristics*

*Contributing scenario: casting operations*

List items: industrial uses  
continuous release

- The phrase structure must be identical in all languages. The number of parameters (in EuPhraC phrases) and the number of explanatory insertions (parenthesis) must be the same in all languages.

*Example parameters:*

*English phrase: Store at temperatures not exceeding ... °C / ... °F.*

*German phrase: Bei Temperaturen von nicht mehr als ... °C / ... °F aufbewahren.*

*It would be a mismatch if for example the German phrase would only list °C and not °F.*

*Example insertions:*

*English phrase: DNEL acute inhalative (local)*

*German phrase: DNEL akut inhalativ (lokal)*

*It would be a mismatch if for example the German phrase would not have the insertion between brackets, e.g. '(lokal)', where the English phrase has the insertion.*

- Acronyms/abbreviations can only be used if there are matching acronyms/abbreviations in all European languages.

*Example:*

*English phrase: municipal STP*

*German phrase: kommunale Kläranlage*

*No abbreviation exist in German language for STP; therefore the phrase in English should also be without abbreviation: municipal sewage treatment plant*

- For phrases including abbreviations and/or acronyms the full text of the abbreviation/acronym should be provided ([acronyms@esdscom.eu](mailto:acronyms@esdscom.eu)), if not yet listed in the public EUPhraC abbreviation/acronym list.
- Phrases may be connected in a serial manner (i.e. they may be concatenated), including punctuation for which the library provides extra phrases. So phrases should never start with punctuation. This keeps the phrase more flexible.

*Example: Do not create a phrase (e.g. “,alternatively”) to connect phrases. Instead, a phrase “alternatively” should be used.*

- Phrase fragments are strongly discouraged. Users (as well as translators) will likely see the phrase without its original context and additional information, remarks and metadata. They will probably misunderstand the meaning of a fragment and translate inappropriately. Either propose full sentences or clearly state a specific context with an example for each and every phrase fragment proposal in the phrase “remark”.
- Full sentences and headers should start with a capital.
- Within a phrase, capitals are only used where required. Example: only capitals for “REACH” and “Regulation”, not for “exposure assessment” or for “risk characterization”.

*Example: “According to the article 14(4) of the REACH Regulation (EC) no 1907/2006 a human-related exposure assessment and risk characterization is not required.”*

- There is a length limitation in every software system. EuPhraC and ESCom have an internal limitation of 1000 characters per phrase (including spaces), but this is far more than a single phrase should ever have and more than some software systems can handle. Also bear in mind that translations are up to 30% longer than English, so a phrase for a system with 500 characters should not have more than around 350 characters in English. Please try to match this.

## Rules on the Content of standard phrases

- Make sure your phrase is needed. Please verify the catalogue before proposing a new phrase. Some of the existing phrases, alone or combined, may convey the same information.
- Be consistent. Do not use similar wording for the same meaning (instead use the same). Do not mix single words / list elements with complete sentences; instead, clearly separate both parts with an introductory phrase for the list elements.

Example:     a) In case of skin irritation, consult a physician.

                  b) In case of skin reactions, consult a physician.

Are you able to explain the difference? Are you sure the user is, too? Is the difference important to note?

- Do not write situational descriptions (operational conditions) together with advice to the user (risk management measures) in the same phrase. At least one part of your proposal may be reused in a different part of the documents, so please split it up.

Example:     Identify potential areas for indirect skin contact and wear gloves (tested to EN374) if hand contact with substance likely.

This combination of phrases can easily be split up in separate standard phrases:

- Identify potential areas for indirect skin contact.
- Wear gloves (tested to EN374) if hand contact with substance is likely.

- Remember a phrase is a segmented text. Do not put all guidance to a specific situation in one sentence. If your phrase proposal consists of more than one grammatically complete sentence, you might want to split the proposal into two. If your proposal text consists of more than one paragraph, you definitely must split the proposal into two or more phrases. A return character (end of a paragraph), or any other so-called whitespace character (tab, or control characters) cannot be part of a phrase.

Example: Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

While it might be useful to have all three sentences together, sentence 2 and 3 are explanatory only and may not be needed in all contexts. Each of these sentences should be one phrase.

- Try to use only one sentence in a standard phrase. If more sentences are needed, split the standard phrase. So the following phrase is what should NOT be done:

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance.

Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

- Phrases should be as generic as possible; try to avoid phrases that are specific in nature (substance or product or activity related).

Examples of what should NOT be done (in general the phrases hereunder are too specific):

Coating agents for fertilizers

Sulphosuccinamates

Manufacture of polymers from monomers in continuous and batch processes. Including production, re-cycling and recovery, degassing, discharging, reactor maintenance and immediate polymer product formation (i.e. compounding, pelletisation, product off-gassing)

- Phrases should contain the presence (not the absence) of a condition. There is no value in communicating that a condition does not apply.

*Examples:*

*Wastewater emission controls are not applicable as there is no direct release to wastewater.*

*Hand protection not applicable.*

*No air emission controls required; required removal efficiency is 0%.*

- Phrases should, as much as possible, specify an instruction that can be implemented by the recipient of the ES, rather than a condition to avoid.

Examples: “*Do not use product for more than*” is a better wording than “*Avoid using product more than*”.

- OC/RMM (Operational Conditions/Risk Management Measures) type phrases have to be directly related to the exposure assessment (quantitatively or qualitatively) in the CSR; this also applies to PPE type phrases (Personal Protective Equipment). If this condition is not met, these phrase are AGPA type phrases (Additional Good Practice Advice). Note that AGPA phrases have to be very generic to be included in the catalogue. Examples of such phrases are:

*Avoid frequent contact with substance.*

*Use container to collect drips.*

*Clear spills immediately.*

- RMM/PPE type phrases should not contain information on the efficiency of the RMM. This should be specified in a separate phrase. An example of a phrase combining the RMM and the efficiency in one sentence is:

*Local exhaust ventilation - efficiency of at least*

This phrase should be split into two: phrase 1: “*Local exhaust ventilation*”; phrase 2: “*efficiency of at least*”.

Note: for each compartment or exposure route efficiency phrases are available in the catalogue. Example:

*“Inhalation – minimum efficiency of”*

- Ensure that per PPE type of phrase only one form of PPE is specified. Examples of incorrect combinations are:

*Wear suitable gloves (tested to EN374) and eye protection.*

*Wear suitable gloves (tested to EN374), coverall and eye protection.*

## Additional rules on phrase translations

If you provide translations for your phrases (note: only English to German!), please bear in mind these additional translation hints:

- Phrases are used in IT systems which have a limited storage length and/or layout space. Make sure that translated length and original length are similar.
- Phrases with parameters must definitely have the same number and order of parameters in every translation. You cannot shuffle parameters, omit or add them, or have a parameter follow as the next phrase if it is marked as a parameter in the original wording.
- Choose similar structures. If you abbreviate a word in one language, do not use the full-length word for the other. If you choose degree Centigrade for one language, do not use Fahrenheit for the other – even if it is more common in the target country. It is up to the IT system to modify the units.

## How to propose new standard phrases?

EuPhraC/ESCom have implemented an open proposal and consultation process to make phrase library additions possible for every user, and still maintain the quality of an expert group driving the phrase package as well as proper documentation of EuPhraC/ESCom development. This openness requires everybody to follow the rules set out below; otherwise the proposal will be denied.

## Phrase proposals

Phrase proposals are accepted for review and acceptance by the section responsible person, one by one via the EuPhraC web interface at <http://draft.euphrac.eu> after you have found an appropriate place in the EuPhraC/ESCom structure for your proposed phrase.

As a first step, please use the tool to search for phrases in the catalogue with identical or similar meaning (for example by searching for key pieces of your phrase proposal). Did you find them? The wording you find has been considered by several experts and might be worth using. If you found phrases containing such key pieces but prefer your own wording, include a reference to the

phrases you found in your proposal as well as a justification on why you think your proposal is needed in addition to the existing phrases.

Where you do not identify possibly suitable phrases at all, carefully consider the phrase rules stated in this guidance. If you think your phrase has added value for the catalogue, submit your phrase in the webtool. Do not forget to indicate to which (sub) section the phrase should be added and provide a detailed justification for the need to have this phrase included in the catalogue. Note that phrases submitted without sufficient justification will not be accepted for review.

For ESCom phrases, the tool includes the possibility to provide the metadata relevant to your proposed phrase, or the XML attribute(s) to which the phrase should be mapped. Please provide this information as comprehensive as possible. This will enable the ESCom phrase group to better understand the context of your proposal and take a well-founded decision. If you prefer to provide information on the metadata for a phrase (instead of the XML attributes), at least the following information is required:

- The relevant ES section(s) (1, 2, 3 or 4)
- For section 2 phrases:
  - The relevant target group(s) (environment, worker, consumer)
  - The relevant sub-section(s) of the contributing scenario (e.g. AFD (Amounts, Frequency, Duration); PC (Product Characteristics), TOM (Technical/Organizational measures); STP (Sewage Treatment Plant); PPE (Personal Protective Equipment); Waste; OOC (Other Operational Conditions); AGPA (Additional Good Practice Advice)
  - To what exposure estimation tool the phrase is related

Please use the web form in the EuPhrac browser tool to send your proposal. You will receive an email with a link to an online system to follow the status of your proposal.

The EuPhraC and ESCom working groups welcome your proposals!

## Phrase proposal evaluation

After a formal check to assess whether the proposed phrase meets the phrase rules as provided in this guidance document, the proposal is then reviewed and assessed for its relevance in various respects by an expert appointed as section responsible person. The section responsible person will take a preliminary decision to accept or reject the phrase or to put the phrase up for discussion within the working group. This preliminary decision will be published in the EuPhraC online system. This system allows for commenting on the proposed phrase and on the preliminary decision.

In order to enhance the quality of the phrase evaluation process, EuPhraC/ESCom has implemented the so-called '4 eyes-principle' in the process. This means that next to the evaluation of phrase proposals by a section responsible person, the proposal is also evaluated by the heads

of the EuPhraC and ESCom working groups and can be reviewed by other members of the working groups. When there is no agreement on the decision to accept or to reject a phrase proposal, the phrase proposal will be put up for discussion in the EuPhraC or ESCom working group meetings to arrive at a final decision. If the phrase is rejected, a justification will be given.

The discussion and final outcome is also published in the EuPhraC online system without naming the phrase author. This ensures a quick and streamlined process for dealing with a larger number of phrase submissions from a broad audience, while still keeping the phrase library consistent and avoiding multiple entries of the same content.

The steps described above are illustrated in the diagram in Figure 1.

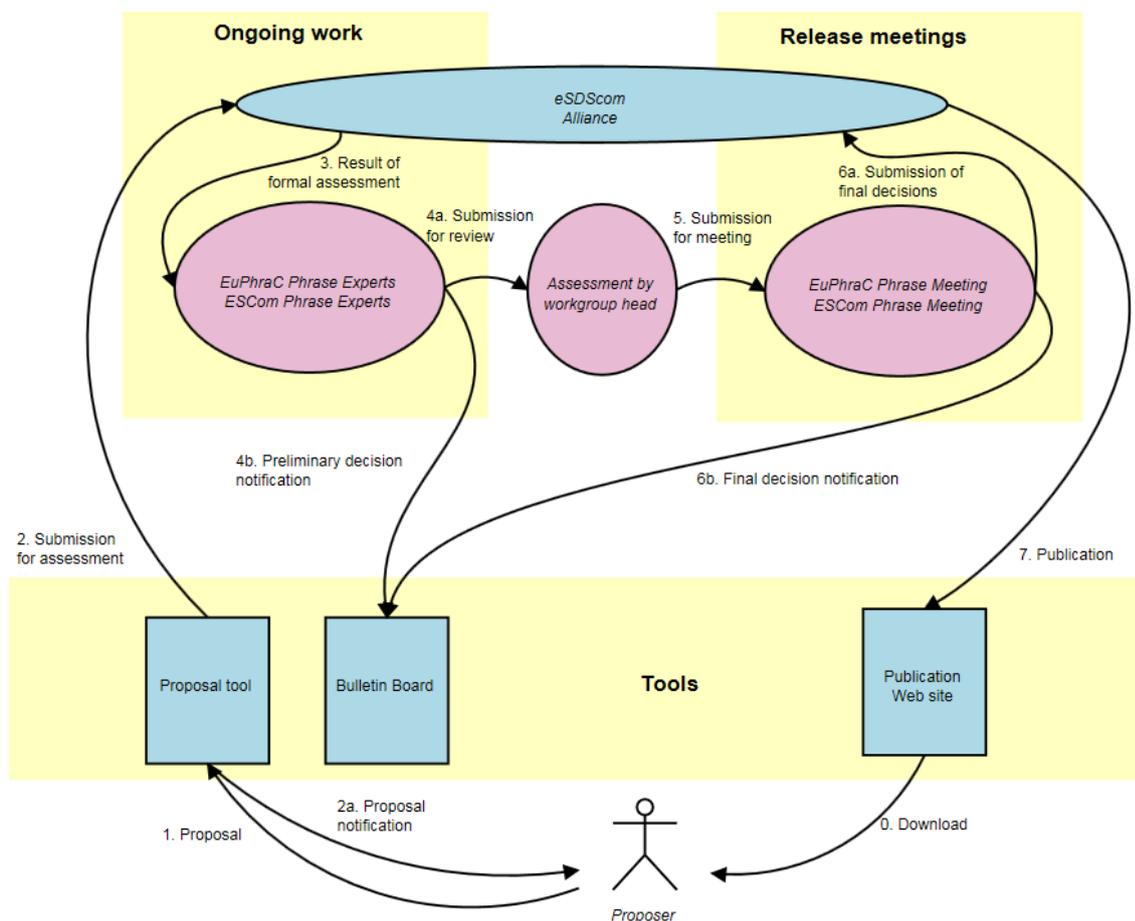


Figure 1: Workflow of the phrase proposal evaluation process